

Title (en)
TRANSPARENT SUBSTRATE WHICH CAN BE USED ALTERNATIVELY OR CUMULATIVELY FOR THERMAL CONTROL, ELECTROMAGNETIC ARMOUR AND HEATED GLAZING

Title (de)
TRANSPARENTES SUBSTRAT, DAS ALTERNATIV ODER KUMULATIV ZUR WÄRMEREGULIERUNG, ELEKTROMAGNETISCHEN ABSCHIRMUNG UND BEHEIZTEN VERGLASUNG VERWENDET WERDEN KANN

Title (fr)
SUBSTRAT TRANSPARENT UTILISABLE ALTERNATIVEMENT OU CUMULATIVEMENT POUR LE CONTROLE THERMIQUE, LE BLINDAGE ELECTROMAGNETIQUE ET LE VITRAGE CHAUFFANT.

Publication
EP 1689690 A1 20060816 (FR)

Application
EP 04805856 A 20041124

Priority
• FR 2004050614 W 20041124
• FR 0313966 A 20031128

Abstract (en)
[origin: WO2005051858A1] The invention relates to a transparent substrate which is made, for example, from glass and which is equipped with a stack of thin layers comprising a plurality of functional layers. The invention is characterised in that: (i) the aforementioned stack of thin layers comprises at least three silver-based functional layers, (ii) the stack has a per-square resistance of $R_c < 1.5 \text{ OMEGA}$, and (iii) the substrate can be subjected to at least one processing operation involving a heat treatment at a temperature of at least 500 DEG C, such as to enable the substrate to be used alternatively or cumulatively to provide thermal control and/or electromagnetic armour and/or heated glazing.

IPC 8 full level
B32B 17/10 (2006.01); **C03C 17/36** (2006.01)

CPC (source: EP KR US)
B32B 17/10018 (2013.01 - EP US); **B32B 17/10036** (2013.01 - EP US); **B32B 17/10174** (2013.01 - EP US); **B32B 17/10229** (2013.01 - EP US); **B32B 17/10761** (2013.01 - EP US); **C03C 17/34** (2013.01 - KR); **C03C 17/36** (2013.01 - EP KR US); **C03C 17/3618** (2013.01 - EP US); **C03C 17/3626** (2013.01 - EP US); **C03C 17/3639** (2013.01 - EP US); **C03C 17/3644** (2013.01 - EP US); **C03C 17/3652** (2013.01 - EP US); **C03C 17/366** (2013.01 - EP US); **C03C 17/3673** (2013.01 - EP US); **C03C 17/3676** (2013.01 - EP US); **C03C 17/3681** (2013.01 - EP US); **B32B 2367/00** (2013.01 - EP US); **H01J 2211/446** (2013.01 - EP US); **Y10T 428/12576** (2015.01 - EP US); **Y10T 428/12611** (2015.01 - EP US); **Y10T 428/12778** (2015.01 - EP US); **Y10T 428/2495** (2015.01 - EP US); **Y10T 428/24975** (2015.01 - EP US); **Y10T 428/265** (2015.01 - EP US)

Citation (search report)
See references of WO 2005051858A1

Cited by
WO2022113107A1

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LU MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)
FR 2862961 A1 20050603; **FR 2862961 B1 20060217**; BR PI0416963 A 20070221; BR PI0416963 B1 20140624; CA 2547465 A1 20050609; CA 2547465 C 20130611; CN 101921066 A 20101222; CN 101921066 B 20121128; CN 1906136 A 20070131; CN 1906136 B 20101020; EA 015109 B1 20110630; EA 200601058 A1 20061027; EP 1689690 A1 20060816; EP 1689690 B1 20180905; ES 2693034 T3 20181207; JP 2007512218 A 20070517; JP 5096001 B2 20121212; KR 101150874 B1 20120613; KR 20060109921 A 20061023; MX PA06005860 A 20060627; PL 1689690 T3 20190329; PT 1689690 T 20181129; TR 201815776 T4 20181121; TW 200526534 A 20050816; US 2007082219 A1 20070412; US 2011236663 A1 20110929; US 7972713 B2 20110705; US 8440329 B2 20130514; WO 2005051858 A1 20050609; ZA 200605287 B 20071227

DOCDB simple family (application)
FR 0313966 A 20031128; BR PI0416963 A 20041124; CA 2547465 A 20041124; CN 200480041103 A 20041124; CN 201010266942 A 20041124; EA 200601058 A 20041124; EP 04805856 A 20041124; ES 04805856 T 20041124; FR 2004050614 W 20041124; JP 2006540561 A 20041124; KR 20067010333 A 20041124; MX PA06005860 A 20041124; PL 04805856 T 20041124; PT 04805856 T 20041124; TR 201815776 T 20041124; TW 93136324 A 20041125; US 201113156028 A 20110608; US 58105604 A 20041124; ZA 200605287 A 20060627